

APPENDIX A

Parties Submitting Comments and Reply Comments in WT Docket 96-86

The following list contains the names of parties filing comments and reply comments with regard to the recommendations made by the NCC, as put forth in the *Fourth Notice*.

Comments

AirNet Communications Corporation (AirNet)
Association of Public-Safety Communications Officials-International, Inc. (APCO)
Baltimore County, Maryland (Baltimore County)
David Buchanan (Buchanan)
City of College Station, Texas (College Station)
City of Mesa, Arizona (Mesa)
Com-Net Ericsson Critical Radio Systems, Inc. (Com-Net Ericsson)
County of Orange, California (Orange County)
Dataradio Corporation (Dataradio)
E.F. Johnson Company (E.F. Johnson)
Federal Law Enforcement Wireless Users Group (FLEWUG)
Joint Commenters (American Association of State Highway and Transportation Officials (AASHTO),
Forestry Conservation Communications Association, International Association of Fire Chiefs, Inc.,
International Association of Fish and Wildlife Agencies, International Municipal Signal Association,
and the National Association of State Foresters)
Ronald J. Gillory, Sr. (Gillory)
Illinois State Police
Institute for Technology Development, Inc. (ITD)
International Association of Chiefs of Police (IACP)
Kenwood Communications Corporation (Kenwood)
Major Cities Police Chief's Association
Major County Sheriffs' Association
Motorola Inc. (Motorola)
National Public Safety Telecommunications Council (NPSTC)
New York State Technology Enterprise Corporation (NYSTEC)
Nokia, Inc. (Nokia)
North American TETRA Forum (TETRA)
Project 25 Steering Committee
Project 25 Technology Interest Group
Public Safety National Coordination Committee (NCC)
Public Safety Wireless Network (PSWN)
State of California (California)
State of Florida (Florida)
State of Ohio (Ohio)

Reply Comments

APCO

City of Houston Fire Department

City of Houston Police Department

City of Houston, Texas (Houston)

Com-Net Ericsson

Dataradio

FLEWUG

IACP

Motorola

National Organization of Black Law Enforcement Executives, Mississippi Chapter

Gary W. Neal

Nokia

Project 25 Steering Committee

Project 25 Technology Interest Group

PSWN

California

APPENDIX B – REGULATORY FLEXIBILITY ANALYSES

I. Final Regulatory Flexibility Analysis (for *Fourth Report and Order*)

As required by the Regulatory Flexibility Act (RFA),²⁴⁷ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Fourth Notice of Proposed Rule Making (Fourth Notice)*²⁴⁸ of this proceeding. The Commission sought written public comment on the IRFA. The present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.²⁴⁹

A. Need for, and Objectives of, the *Fourth Report and Order*:

Our objective is to promote the early and efficient use of public safety spectrum in the frequencies at 764-776 MHz and 794-806 MHz (the 700 MHz band). Specifically, this action will: promote spectrum efficiency through allowing secondary trunking on the Interoperability channels; assist in delineating the roles of Regional Planning Committees (RPCs) and establishment of State Interoperability Executive Committees (SIECs); promote efficient administration of the Interoperability channels by state or local entities; designate calling channels; permit encryption on the Interoperability channels; and establish digital voice standards and efficiency standards for the Interoperability channels, and digital data standards and channel reservation for the Interoperability channels.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA:

No comments were submitted in response to the IRFA. Some comments, however, raised issues that may be of particular concern to small entities, including Interoperability standards, migration, and administration. Other issues include equipment display characteristics. The Commission carefully considered all comments in reaching the decision set forth herein, and each decision consider any impact on small entities.

C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply:

113. The RFA directs agencies to provide a description of and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules, if adopted.²⁵⁰ The RFA generally defines “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”²⁵¹ In addition, the term “small business” has the same meaning as “small business concern” under the Small Business Act.²⁵² A small business concern is one which : (1) is

²⁴⁷ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²⁴⁸ Development of Operational, Technical, and Spectrum Requirements for meeting Federal, State and Local Public Safety Communication Requirements Through the Year 2010, WT Docket No. 96-86, *Fourth Notice of Proposed Rulemaking*, 15 FCC Rcd 16899 (2000) 65 Fed Reg. 51788 (Aug. 25, 2000).

²⁴⁹ See 5 U.S.C. § 604.

²⁵⁰ 5 U.S.C. § 603(b)(3).

²⁵¹ 5 U.S.C. § 601(6).

²⁵² 5 U.S.C. § 601(3) (incorporating by reference the definition “small business concern” in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such terms which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

independently owned and operated; (2) is not dominant in its field of operations; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).²⁵³ A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."²⁵⁴ Nationwide, as of 1992, there were approximately 275,801 small organizations.²⁵⁵ "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."²⁵⁶ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²⁵⁷ This number includes 38,978 counties, cities, and towns; of these, 37,566, or ninety-six percent, have populations of fewer than 50,000.²⁵⁸ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (ninety-one percent) are small entities.

Public Safety Radio Pool Licensees. As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.²⁵⁹ Spectrum in the 700 MHz band for public safety services is governed by 47 U.S.C. § 337. Non-Federal governmental entities as well as private businesses are licensees for these services. All governmental entities with populations of less than 50,000 fall within the definition of a small entity.²⁶⁰

Radio and Television Equipment Manufacturers. We anticipate that at least six radio equipment manufacturers will be affected by our decisions in this proceeding. According to the SBA's regulations, a radio and television broadcasting and communications equipment manufacturer must have 750 or fewer employees in order to qualify as a small business concern.²⁶¹ Census Bureau data indicate that there are 858 U.S. firms that manufacture radio and television broadcasting and communications equipment, and

²⁵³ Small Business Act, 15 U.S.C. § 632 (1996).

²⁵⁴ 5 U.S.C. § 601(4).

²⁵⁵ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the SBA).

²⁵⁶ 5 U.S.C. § 601(5).

²⁵⁷ U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

²⁵⁸ *Id.*

²⁵⁹ See Subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1 - 90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code) and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations who set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

²⁶⁰ 5 U.S.C. § 601(5).

²⁶¹ 13 C.F.R. § 121.201, Standard Industrial Code (SIC) 3663.

that 778 of these firms have fewer than 750 employees and would therefore be classified as small entities.²⁶² We do not have information that indicates how many of the six radio equipment manufacturers associated with this proceeding are among these 778 firms. However, Motorola and Ericsson, two of the six manufacturers, are major, nationwide radio equipment manufacturers, and, thus, we conclude that these manufacturers would *not* qualify as small businesses.

Television Stations. This proceeding will affect full service TV station licensees (Channels 60-69), TV translator facilities, and low power TV (LPTV) stations. The SBA defines a TV broadcasting station that has no more than \$10.5 million in annual receipts as a small business.²⁶³ TV broadcasting stations consist of establishments primarily engaged in broadcasting visual programs by TV to the public, except cable and other pay TV services.²⁶⁴ Included in this industry are commercial, religious, educational, and other TV stations.²⁶⁵ Also included are establishments primarily engaged in TV broadcasting and which produce taped TV program materials.²⁶⁶ Separate establishments primarily engaged in producing taped TV program materials are classified under another SIC number.²⁶⁷

There were 1,509 TV stations operating in the Nation in 1992.²⁶⁸ That number has remained fairly constant as indicated by the approximately 1,551 operating TV broadcasting stations in the Nation as of February 28, 1997.²⁶⁹ For 1992²⁷⁰ the number of TV stations that produced less than \$10.0 million in revenue was 1,155 establishments, or approximately 77 percent of the 1,509 establishments.²⁷¹ There are currently 95 full service analog TV stations, either operating or with approved construction permits on

²⁶² U.S. Dept. of Commerce, *1992 Census of Transportation, Communications and Utilities* (issued May 1995), SIC 3663.

²⁶³ 13 C.F.R. § 121.201, SIC 4833 (1996).

²⁶⁴ Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, *1992 Census of Transportation, Communications and Utilities, Establishment and Firm Size, Series UC92-S-1, Appendix A-9* (1995) (ESA 1992 Census).

²⁶⁵ See Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual* (1987), at 283, which describes TV Broadcasting Station (SIC 4833) as:

Establishments primarily engaged in broadcasting visual programs by television to the public, except cable and other pay television services. Included in this industry are commercial, religious, educational and other television stations. Also included here are establishments primarily engaged in television broadcasting and which produce taped television program materials.

²⁶⁶ ESA 1992 Census at Appendix A-9.

²⁶⁷ ESA 1992 Census at Appendix A-9; SIC 7812 (Motion Picture and Video Tape Production); SIC 7922 (Theatrical Producers and Miscellaneous Theatrical Services (producers of live radio and TV programs)).

²⁶⁸ *Allocation Report and Order*, 12 FCC Rcd at 22953 (1998), at Appendix C; ESA 1992 Census at Appendix A-9.

²⁶⁹ *Allocation Report and Order*, 12 FCC Rcd 22953 (1998) at Appendix C.

²⁷⁰ A census for communications establishments is performed every five years ending with a "2" or "7." See ESA 1992 Census at III.

²⁷¹ The amount of \$10 million was used to estimate the number of small business establishments because the relevant Census categories stopped at \$9,999,999 and began at \$10,000,000. No category for \$10.5 million existed. Thus, the number is as accurate as is possible to calculate with the available information.

channels 60-69.²⁷² In the *DTV Proceeding*, we adopted a DTV Table that provides only 15 allotments for DTV stations on channels 60-69 in the continental United States.²⁷³ There are seven DTV allotments in channels 60-69 outside the continental United States.²⁷⁴ Thus, the rules will affect approximately 117 TV stations; approximately 90 of those stations may be considered small businesses.²⁷⁵ These estimates may overstate the number of small entities since the revenue figures on which they are based do not include or aggregate revenues from non-TV affiliated companies. We recognize that the rules may also impact minority-owned and women-owned stations, some of which may be small entities. In 1995, minorities owned and controlled 37 (3.0 percent) of 1,221 commercial TV stations in the United States.²⁷⁶ According to the U.S. Bureau of the Census, in 1987 women owned and controlled 27 (1.9 percent) of 1,342 commercial and non-commercial TV stations in the United States.²⁷⁷

There are currently 4,977 TV translator stations and 1,952 LPTV stations.²⁷⁸ Approximately 1,309 low power TV and TV translator stations are on channels 60-69²⁷⁹ which could be affected by policies in this proceeding. The Commission does not collect financial information of any broadcast facility and the Department of Commerce does not collect financial information on these broadcast facilities. We will assume for present purposes, however, that most of these broadcast facilities, including LPTV stations, could be classified as small businesses. As indicated earlier, approximately 77 percent of TV stations are designated under this analysis as potentially small businesses. Given this, LPTV and TV translator stations would not likely have revenues that exceed the SBA maximum to be designated as small businesses.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements:

The *Fourth Report and Order* adopts rules that will entail reporting, recordkeeping, and/or third-

²⁷² See *Allocation Notice*, 12 FCC Rcd at 14142.

²⁷³ See *DTV Proceeding*, 12 FCC Rcd 14588.

²⁷⁴ See *Allocation Notice* 12 FCC Rcd 14142, n.5.

²⁷⁵ We use the 77 percent figure of TV stations operating at less than \$10 million for 1992 and apply it to the 117 TV stations to arrive at 90 stations categorized as small businesses.

²⁷⁶ *Minority Commercial Broadcast Ownership in the United States*, U.S. Dep't of Commerce, National Telecommunications and Information Administration, The Minority Telecommunications Development Program ("MTDP") (Apr. 1996). MTDP considers minority ownership as ownership of more than 50 percent of a broadcast corporation's stock, voting control in a broadcast partnership, or ownership of a broadcasting property as an individual proprietor. The minority groups included in this report are Black, Hispanic, Asian, and Native American.

²⁷⁷ See Comments of American Women in Radio and TV, Inc. in MM Docket No. 94-149 and MM Docket No. 91-140 at 4 n.4 (filed May 17, 1995) (citing 1987 Economic Censuses, *Women-Owned Business*, WB87-1, U.S. Dep't of Commerce, Bureau of the Census, August 1990 (based on 1987 Census)). After the 1987 Census report, the Census Bureau did not provide data by particular communications services (four-digit SIC Code), but rather by the general two-digit SIC Code for communications (#48). Consequently, since 1987, the Census Bureau has not updated data on ownership of broadcast facilities by women, nor does the Commission collect such data. However, we sought comment on whether the Annual Ownership Report Form 323 should be amended to include information on the gender and race of broadcast license owners. Policies and Rules Regarding Minority and Female Ownership of Mass Media Facilities, *Notice of Proposed Rule Making*, 10 FCC Rcd 2788, 2797 (1995).

²⁷⁸ See *Allocation Report and Order*, 12 FCC Rcd 22986 at Appendix C.

²⁷⁹ See *Allocation Notice* at 12 FCC Rcd 14142, n.3.

party consultation, including the requirement that a state notify the Commission regarding the state's intentions regarding administration of the Interoperability channels. The Commission believes, however, that these requirements are the minimum needed. For example, the *Fourth Report and Order* requires that, while public safety entities are not required to enter into a formal Memoranda of Understanding (MOUs) with a state regarding use of Interoperability channels, applicants must secure approval from the state. To minimize any Federally-imposed paperwork burden, we have left the procedure for such an agreement up to the state. Because we are requiring monitoring of the Interoperability channels, there is the possibility that additional resources may be required. This type of monitoring may be routine for some, while others may require additional resources. In any event, we believe the impact will not be substantial.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered:

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities. 5 U.S.C. §603.

The NCC, comprised of representatives from government, the public safety community, and the communications equipment manufacturing industry, was chartered by the FCC as a Federal Advisory Committee, effective February 25, 1999. The NCC made recommendations concerning various issues addressed in this *Fourth Notice*. We note that in several instances, to benefit all entities, including small entities, we did not propose a particular recommendation.

In formulating the rules in the *Fourth Report and Order*, we have reduced economic burdens wherever possible. The regulatory burdens that we have adopted are necessary to ensure that the public receives the public safety benefits of innovative new services in a prompt and efficient manner. For example, we have adopted technical and operational rules that will promote competition in the equipment market. We believe that the rules must be as competitively and technologically neutral as possible, in order to allow for competing equipment designs and to avoid hindering future innovative technological developments. We note that tighter technical specifications generally allow more intense spectrum use, but may result in higher equipment costs. Conversely, although wider tolerances may allow manufacturers to use less costly component parts in transmitting equipment, they also may result in less efficient spectrum use. With these considerations in mind, we believe that the technical regulations we adopt herein provide a reasonable balance of these concerns.

Under the regional planning process, frequency coordination is competitive. Frequency coordination is the process by which a private organization recommends to the Commission the most appropriate frequencies for private land mobile radio service applicants.²⁸⁰ Frequency coordinators provide a valuable service to the Commission by eliminating common application errors, thereby improving the quality of the applications and resolving potential interference problems at the source. We continue to believe that the encouragement of competition among coordinators promotes cost-based pricing of coordination services and provides incentives for enhancing service quality. Therefore, we will continue to allow any of the certified public safety coordinators to provide coordination in the 700 MHz band.

Recognizing the budgetary constraints that public safety entities face as a matter of course, we have adopted rules that encourage broad-based efforts, such as projects on the state and regional level, to coordinate and consolidate operations that are critical to meeting the needs of public safety with cost

²⁸⁰ See Frequency Coordination in the Private Land Mobile Radio Services, PR Docket No. 83-737, *Report and Order*, 103 FCC 2d 1093 (1986).

effective, spectrally-efficient radio systems. For example, we have adopted permissive trunking on certain public safety channels in the 700 MHz band. Trunked systems provide service to many governmental entities in a specific geographic area and offer a higher degree of efficiency than some smaller, non-trunked systems. A difficulty in establishing these types of shared systems is that they require individual agencies to surrender some autonomy in return for the efficiencies and better coverage of a larger system. In addition, the funding required to develop the infrastructure necessary to support some of the newer technologies is often too great to permit small public safety agencies to participate in new, sophisticated, spectrum efficient, wireless radio systems. These same agencies, however, might be able to participate in a county-wide or state-wide system. For these, and other, reasons, we encourage the use of shared systems in the public safety community.²⁸¹

Report to Congress: The Commission will send a copy of the *Fourth Report and Order*, including this FRFA, in a report to be sent to Congress pursuant to the SBREFA, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the commission will send a copy of the *Fourth Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. In addition, the *Fourth Report and Order* and FRFA (or summaries thereof) will be published in the Federal Register. *See* 5 U.S.C. § 604(b).

II. **Initial Regulatory Flexibility Analysis** (for *Fifth Notice of Proposed Rule Making*)

As required by the Regulatory Flexibility Act (RFA),²⁸² the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this *Fifth Notice of Proposed Rule Making (Fifth Notice)*. Written public comments are requested regarding this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Fifth Notice* provided in paragraph 103. The Commission will send a copy of the *Fifth Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.²⁸³ In addition, the *Fifth Notice* and IRFA (or summaries thereof) will be published in the Federal Register.²⁸⁴

A. **Need for, and Objectives of, the Proposed Rules:**

In the *Fifth Notice*, we continue our evaluation of rules applicable to the use of public safety spectrum in the frequencies at 764-776 MHz and 794-806 MHz (the 700 MHz band). Specifically, the *Fifth Notice* seeks comment on a "migration path" to a more spectrum-efficient technology standard for public safety general use frequencies in the 700 MHz band. We seek comment on only the issue of what path the Commission should adopt. Adopting such a path should provide for the prompt entry of public safety entities onto the 700 MHz band when that band is cleared of its present occupants.

B. **Legal Basis:**

Authority for issuance of this item is contained in Sections 1, 4(i), 7, 301, 302, 303, and 337 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 157, 301, 302, 303, 337.

²⁸¹ Area-wide licenses often encourage the rapid development and deployment of innovative services and facilitate interoperability and operational standards, while allowing economies of scale that encourage the development of low cost equipment. *See, e.g.,* Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service, GN Docket No. 96-228, *Report and Order*, 12 FCC Rcd 10785, 10814 (1997).

²⁸² *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²⁸³ *See* 5 U.S.C. § 603(a).

²⁸⁴ *See id.*

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.²⁸⁵ The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small business concern" under Section 3 of the Small Business Act.²⁸⁶ A small business concern is one that: (1) is independently owned and operated, (2) is not dominant in its field of operation, and (3) satisfies any additional criteria established by the Small Business Administration.²⁸⁷ Nationwide, as of 1992, there were approximately 275,801 small organizations.²⁸⁸ "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."²⁸⁹ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²⁹⁰ This number includes 38,978 counties, cities, and towns; of these, 37,566, or ninety-six percent, have populations of fewer than 50,000.²⁹¹ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (ninety-one percent) are small entities. Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the proposed rules, if adopted.

Public Safety Radio Pool Licensees. As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.²⁹² Spectrum in the 700 MHz band for public safety services is governed by 47 U.S.C. § 337. Non-Federal governmental entities, as well as private businesses, are licensees for these services. As indicated above, all governmental entities with populations of less than 50,000 fall within the definition of a small entity.²⁹³ Neither the Commission nor the SBA has developed a definition of small businesses directed

²⁸⁵ 5 U.S.C. § 603(b)(3).

²⁸⁶ *Id.* § 601(b)(3).

²⁸⁷ *Id.* § 632.

²⁸⁸ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

²⁸⁹ 5 U.S.C. § 601(5).

²⁹⁰ U.S. Dep't of Commerce, Bureau of the Census, *1992 Census of Governments*.

²⁹¹ *Id.*

²⁹² See subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

²⁹³ 5 U.S.C. § 601(5).

specifically toward public service licensees. Therefore, the applicable definition of small business is the definition under the SBA rules applicable to radiotelephone (wireless) companies. This provides that a small business is a radiotelephone company employing no more than 1,500 persons.²⁹⁴ According to the Bureau of the Census, only twelve radiotelephone firms from a total of 1,178 such firms which operated during 1992 had 1,000 or more employees.²⁹⁵ Therefore, even if all twelve of these firms were public safety licensees, nearly all would be small businesses under the SBA's definition, if independently owned and operated.

Radio and Television Equipment Manufacturers. We anticipate that at least six radio equipment manufacturers will be affected by our decisions in this proceeding. According to the Small Business Administration's regulations, a radio and television broadcasting and communications equipment manufacturer must have 750 or fewer employees in order to qualify as a small business concern.²⁹⁶ Census Bureau data indicate that there are 858 U.S. firms that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would therefore be classified as small entities.²⁹⁷ We do not have information that indicates how many of the six radio equipment manufacturers associated with this proceeding are among these 778 firms. Motorola and Ericsson, however, are major, nationwide radio equipment manufacturers, and thus, we conclude that they would not qualify as small businesses.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements:

The *Fifth Notice* does not propose a rule that will entail reporting, recordkeeping, and/or third-party consultation.

E. Significant Alternatives Minimizing the Economic Impact on Small Entities:

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities. 5 U.S.C. §603. In this proceeding, we have several options for migrating from 12.5 kHz technology to 6.25 kHz technology. We seek to determine the most efficient, cost effective, and quickest migration path for the public safety community.

Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules:

None.

²⁹⁴ 13 C.F.R. 121.201, SIC code 4812.

²⁹⁵ Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, *1992 Census of Transportation, Communications and Utilities, Establishment and Firm Size, Series UC92-S-1*, at Table 5, SIC code 4812.

²⁹⁶ 13 C.F.R. § 121.201, (SIC) Code 3663.

²⁹⁷ U.S. Dep't of Commerce, *1992 Census of Transportation, Communications and Utilities* (issued May 1995), SIC category 3663.

APPENDIX C

FINAL RULES

Part 90 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Secs. 4, 251-52, 303, 309, 332 and 337, 48 Stat. 1066, 1082, as amended, 47 U.S.C. 154, 251-52, 303, 309, 332 and 337, unless otherwise noted.

2. Section 90.179 is amended by adding new paragraph (j) to read as follows:

§ 90.179 Shared use of radio stations.

(j) On the Interoperability Channels in the 700 MHz Public Safety Band (See 90.531(b)(1)), hand-held and vehicular units operated by any licensee holding a license in the 700 Public Safety Band or by any licensee for any public safety frequency pursuant to Part 90 of the Commission's rules may communicate with or through land stations without further authorization and without a sharing agreement.

3. Section 90.421 is amended by adding new paragraph (a)(3) to read as follows:

§ 90.421 Operation of mobile units in vehicles not under the control of the licensee.

(a) *Public Safety Pool* ***

(2) ***

(3) On the Interoperability Channels in the 700 MHz Public Safety Band (See § 90.531(b)(1)), hand-held and vehicular transmitters may be operated by any licensee holding a license in the 700 MHz Public Safety Band or by any licensee holding a license for any other public safety frequency pursuant to Part 90 of the Commission's rules. Therefore, individual licenses are not required for hand-held and vehicular transmitters in the 700 MHz Band.

4. A new Section 90.525 is added to read as follows:

§ 90.525 Administration of Interoperability channels.

(a) States are responsible for administration of the Interoperability channels in the 764-776 MHz and 794-806 MHz frequency bands. Base and control stations must be licensed individually. A public safety entity meeting the requirements of § 90.523 may operate mobile or portable units on the Interoperability channels in the 764-776 MHz and 794-806 MHz frequency bands without a specific authorization from the Commission provided it holds a Part 90 license. All persons operating mobile or portable units under this authority are responsible for compliance with Part 90 of these Rules and other applicable federal laws.

(b) License applications for Interoperability channels in the 764-776 MHz and 794-806 MHz frequency bands must be approved by a state-level agency or organization responsible for administering state emergency communications. States may hold the licenses for Interoperability channels or approve

other qualified entities to hold such licenses. States may delegate the approval process for Interoperability channels to another entity, such as regional planning committees.

5. Section 90.531 is amended by adding paragraphs (i) through (iii) in subsection (b)(1), modifying paragraph (b)(2), adding a new paragraph (b)(7) and amending paragraph (d) to read as follows:

§ 90.531 Band plan.

* * * * *

(b)(1) * * *

(i) *Narrowband data Interoperability channels.* The following channel pairs are reserved nationwide for the express purpose of data transmission only: 279/1239, 280/1240, 921/1881, and 922/1882.

(ii) *Narrowband calling Interoperability channels.* The following channel pairs are dedicated nationwide for the express purpose of *Interoperability* calling only: 39/999, 40/1000, 681/1641, and 682/1642. They may not be used primarily for routine, day-to-day communications. Encryption is prohibited on the designated calling channels.

(iii) *Narrowband trunking Interoperability channels.* The following interoperability channel pairs may be combined with the appropriate adjacent secondary trunking channel pairs and used in the trunked mode on a secondary basis to conventional interoperability operations: 23/983, 24/984, 63/1023, 64/1024, 103/1063, 104/1064, 143/1103, 144/1104, 183/1143, 184/1144, 223/1183, 224/1184, 263/1223, 264/1124, 303/1263 and 304/1264. For every ten general use channels trunked at a station, entities may obtain a license to operate in the trunked mode on two of the above contiguous Interoperability channel pairs. The maximum number of Interoperability channel pairs that can be trunked at any one location is eight.

(2) *Narrowband reserve channels.* The following narrowband channels are undesignated and reserved: 37, 38, 77, 78, 117, 118, 157, 158, 197, 198, 221, 222, 237, 238, 277, 278, 317, 318, 643, 644, 659, 660, 683, 684, 699, 700, 723, 724, 739, 740, 763, 764, 779, 780, 803, 804, 819, 820, 843, 844, 859, 860, 883, 884, 899, 900, 923, 924, 939, 940, 997, 998, 1037, 1038, 1077, 1078, 1117, 1118, 1157, 1158, 1181, 1182, 1197, 1198, 1237, 1238, 1277, 1278, 1603, 1604, 1619, 1620, 1643, 1644, 1659, 1660, 1683, 1684, 1699, 1700, 1723, 1724, 1739, 1740, 1763, 1764, 1779, 1780, 1803, 1804, 1819, 1820, 1843, 1844, 1859, 1860, 1883, 1884, 1899, 1900.

* * * * *

(7) *Secondary Trunking Channels.* The following channels pairs are reserved for secondary trunking operations: 21/981, 22/982, 61/1021, 62/1022, 101/1061, 102/1062, 141/1101, 142/1102, 181/1141, 182/1142, 221/1181, 222/1182, 261/1221, 262/1222, 301/1261 and 302/1262. They may be used only in combination with the appropriate adjacent Interoperability channel pairs specified in (b)(1)(iii) of this section in trunked systems.

* * * * *

(d) *Combining channels.* Except as noted below, at the discretion of the appropriate regional planning committee, contiguous channels may be used in combination in order to accommodate requirements for larger bandwidth emissions, in accordance with this paragraph. Interoperability channels may not be combined with channels in another group except for channels for Secondary

Trunking Channels.

6. Section 90.531(b)(2) is amended by deleting reference to the following channel numbers: 21, 22, 37, 38, 61, 62, 77, 78, 101, 102, 141, 142, 181, 182, 221, 222, 261, 262, 277, 278, 301, 302, 317, 318, 981, 982, 997, 998, 1021, 1022, 1037, 1038, 1061, 1062, 1101, 1102, 1141, 1142, 1181, 1182, 1221, 1222, 1237, 1238, 1261, 1262, 1277, and 1278.

7. Section 90.537 is amended to read as follows:

§ 90.537 Trunking requirement.

(a) *General use channels.* All systems using six or more narrowband channels in the 764-776 MHz and 794-806 MHz frequency bands must be trunked systems, except for those described in paragraph (b) of this section.

(b) *Interoperability channels.* (i) Trunking is permitted only on Interoperability channels specified in § 90.531(b)(1)(iii). The following requirements apply to Interoperability channels where trunking is employed: (i) trunked use must be strictly on a secondary, non-interference basis to conventional operations; and (ii) the licensee must monitor and immediately release the channels when those channels are needed for interoperability purposes.

8. Section 90.547 is revised to read as follows:

§ 90.547 Interoperability channel capability requirement.

Except as noted below, mobile and portable transmitters operating in the 764-776 MHz and 794-806 MHz frequency bands must be capable of operating on all of the designated nationwide narrowband Interoperability channels pursuant to the standards specified in this part.

(a) Mobile and portable transmitters that are designed to operate only on the Low Power Channels specified in Sections 90.531 (b)(3) and (4) are exempt from this Interoperability channel requirement.

(b) Mobile and portable transmitters that are designed to operate only on the narrowband data Interoperability channels specified in Section 90.531 (b)(1)(i) are exempt from this Interoperability channel requirement.

(c) Mobile and portable transmitters that are designed to operate only in the voice mode do not have to operate on the narrowband data Interoperability channels specified in Section 90.531 (b)(1)(i).

9. A new Section 90.548 is added to read as follows:

§ 90.548 Interoperability Technical Standards

(a) Transmitters operating on those narrowband channels in the 764-776 and 794-806 MHz band designated for interoperability (*See* 90.531) shall conform to the following technical standards:

(i) Transmitters designed for voice operation within a 12.5 kHz or 6.25 kHz bandwidth shall conform to the following standards: ANSI/TIA/EIA102.BAAA-1 (common air interface); ANSI/TIA/EIA102.BABA (vocoder).

(ii) Transmitters designed for data transmission within a 12.5 kHz or 6.25 kHz bandwidth shall conform to the following standards, as applicable: ANSI/TIA/EIA 102.BAEA (data overview); ANSI/TIA/EIA 102.BAEB (packet data specification); ANSI/TIA/EIA 102.BAEC (circuit data description); ANSI/TIA/EIA 102.BAEA (radio control protocol); and ANSI/TIA/EIA 102.BABA (vocoder).

(b) Copies of the standards listed in this Section that are incorporated by reference can be purchased from the American National Standards Institute, Washington, DC Headquarters, 1819 L Street, NW, 6th Floor, Washington, DC 20036.

(c) Copies of the standards listed in this Section that are incorporated by reference may be inspected at the Federal Communications Commission, 445 12th Street, SW, Washington, DC (Reference Information Center) or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington D.C.

10. A new Section 90.553 is added to read as follows:

§ 90.553 Encryption

- (a) Encryption is permitted on all but the two nationwide Interoperability calling channels. Radios employing encryption must have a readily accessible switch or other readily accessible control that permits the radio user to disable encryption.
- (b) If Encryption is employed then the following encryption protocol must be used: TIA/EIA IS AAAA-A Project 25 DES.
- (c) Copies of the standards listed in this Section that are incorporated by reference can be purchased from TIA/EIA, 2500 Wilson Boulevard, Arlington, VA, 22201, or Global Engineering Documents, 155 Inverness Way East, Englewood, CO 80112.